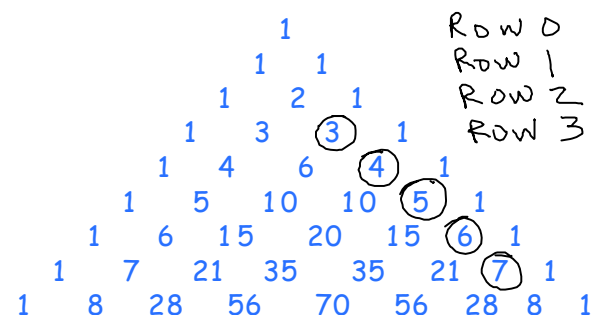


Unit 4  
Day 3  
Section 3.3  
Binomial Expansion  
Using Pascal's Triangle

# PASCAL'S TRIANGLE



PUT ON SIDE BOARD

Using Pascal's triangle for binomial expansion.

1)  $(x+y)^5$  Row 5: 1, 5, 10, 10, 5, 1

$$1x^5y^0 + 5x^4y^1 + 10x^3y^2 + 10x^2y^3 + 5xy^4 + 1x^0y^5$$

$$x^5 + 5x^4y + 10x^3y^2 + 10x^2y^3 + 5xy^4 + y^5$$

Watch your signs and coefficients!!!

2)  $(2x-y)^7$  1, 7, 21, 35, 35, 21, 7, 1

$$1(2x)^7(-y)^0 + 7(2x)^6(-y)^1 + 21(2x)^5(-y)^2 + 35(2x)^4(-y)^3 + 35(2x)^3(-y)^4$$

$$+ 21(2x)^2(-y)^5 + 7(2x)(-y)^6 + 1(2x)^0(-y)^7$$

$$128x^7 - 448x^6y + 672x^5y^2 - 560x^4y^3 + 280x^3y^4$$

$$- 84x^2y^5 + 14xy^6 - y^7$$

3)  $(3a + 2b)^4$

## HOMEWORK

Unit 4 Day 3  
p 34: 61-70 all